

693.6

Sykes Catalog

**Metal Lath
and Building
Specialties**

**Sykes Metal Lath Co.
Niles, Ohio**

INTRODUCTION

TWENTY-FIVE years close contact with the building trades has permitted us to keep pace with the tendency towards refinement in home and public buildings, and the products shown on these pages are the evolution of long and continuous work to keep abreast of modern requirements.

Metal Lath is no longer considered an extra, and the prospective builder does not ask, "Shall I use Metal Lath," but "What Kind of Metal Lath shall I use?" and described herein you will find various types of Metal Lath sufficient to meet every requirement as a base for plastic material.

Conveniences such as our steel specialties are as much a necessity in the home as light and heat, and their low cost and ease of installation bring them within the reach of all classes of builders.

The specifications and miscellaneous information are the result of our own long experience or have been collected from the best known authorities.

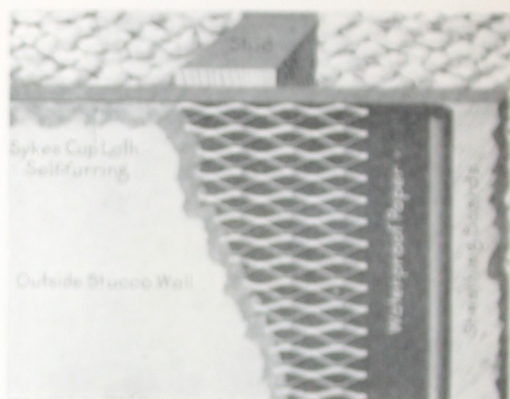
THE
SYKES METAL LATH
COMPANY
NILES, OHIO

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See Pages 16 and 17

EXPANDED CUP LATH on its first appearance back in the "Nineties," jumped immediately into first place, as a truly self-furring expanded lath, recognized by all authorities as the best assurance of perfect non-cracking stucco walls. Altho having greater advantages than flat lath, it costs no more and is actually easier to erect and plaster on.

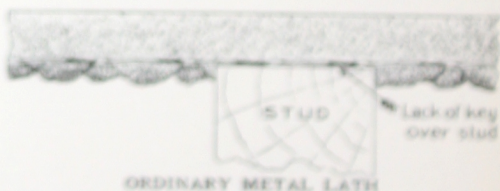


EXPANDED CUP METAL LATH

A glance at the illustration below will show why Expanded Cup is so much superior—all parts of the wall are of even thickness—the key is uniformly good—and the corrugations of the lath reinforce the stucco in all directions.



SYKES EXPANDED CUP METAL LATH



ORDINARY METAL LATH

EXPANDED CUP IS A BACKBONE,
NOT MERELY A BACKGROUND.

STUCCO walls reinforced with Expanded Cup Lath are as strong and durable as any masonry walls, and it costs nothing to maintain them.

**FIREPROOF COOL IN SUMMER
WARM IN WINTER**



A Frame House Before Stucco Overcoated

Any old house can be modernized with Expanded Cup Lath



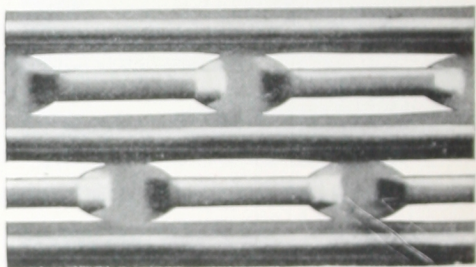
*Same House After Being Stucco Overcoated
With Sykes Expanded Metal Lath*

**Sizes and Weights
EXPANDED CUP LATH**

Painted	2.5 lbs. per sq. yd.
Painted	3.4 lbs. per sq. yd.
Galvanized	3.0 lbs. per sq. yd.
Galvanized	3.4 lbs. per sq. yd.

Sheets 18"x96", packed 15 sheets, 20 sq. yds., to the bundle. (See stucco specifications page 19).

TROUGH SHEET LATH, is the "hurry-up" lath; there is no lost motion or waste in erection or plastering. It is so rigid that one man can easily support the sheet while he nails it on. It is so rigid the brown coat can be applied while the scratch coat is still green, which means practically two coat work and saves the expense and lost time in moving scaffolding between the first and second coats. The apprentice can do a good job of plastering on this lath—it is as easy as plastering on wood and takes less time.



TROUGH SHEET LATH

Another great advantage of Trough Lath is its plaster saving properties. All the plaster that goes thru the opening stays on the lath, none of it falls down and is lost, it remains a part of the wall.

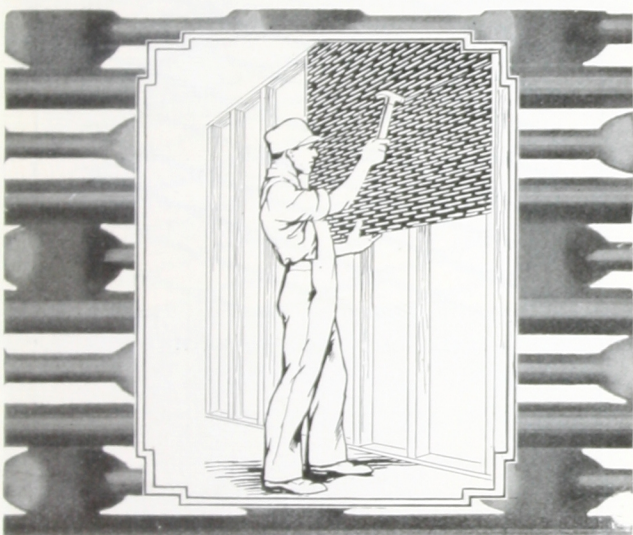
The trough formation of the ribs create a suction and makes it the ideal lath for overhead work on ceilings.

Trough Sheet Lath is the heaviest and most rigid type of Metal Lath made, and its higher first cost is more than covered by the saving in plaster and labor.

MOST ECONOMICAL LATH MADE

The framing for plastered partitions must be rigid, and Trough Sheet Lath acts as a bracing to tie the studs together in such a manner that the studs can be safely spaced further apart. Non-bearing partitions, when this lath is used, studs can be spaced 24-inches on centers, and a considerable saving is effected in the studding.

The rigidity of Trough Lath is well demonstrated in its use as a base for tile setting. Tile must have a solid backing, otherwise it will crack, and Trough Lath is as satisfactory and more economical than masonry or concrete walls.



In steel joist floor construction, Trough Sheet Lath provides greater rigidity between the joists and there is less loss thru seepage.

RECOMMENDED MAXIMUM SPACINGS FOR TROUGH SHEET LATH

For Walls

Wood Studs	Metal Studs
Spacing 24-inches	30-inches

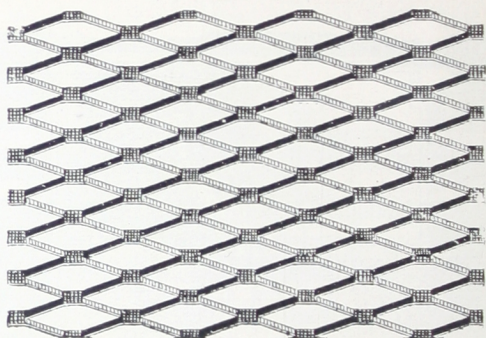
For Ceilings

Wood Joists	Channel Furring
Spacing 24-inches	24-inches

Sizes and Weights of Trough Sheet Lath

Painted—4½ lbs. per sq. yd.
 Sheets 13½"x96", 10 sheets, 10 yds. to Bdl.
 Sheets 24"x96", 9 sheets, 16 yds. to Bdl.

ECONOMY DIAMOND LATH is of the same type used by the National Board of Fire Underwriters in the tests on Metal Lath and gypsum plaster on wood supports conducted at Chicago in the year 1922, and as a result of these tests, this body recommends a one-hour rating for non-bearing wood stud partitions, and for ceilings with wood joist floor construction.



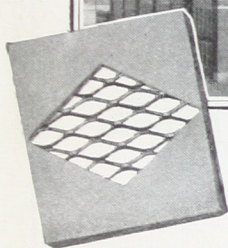
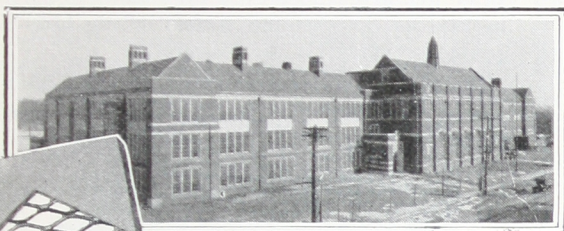
ECONOMY DIAMOND LATH

ECONOMY DIAMOND LATH is manufactured from open hearth steel sheets on a press type machine, which insures a lath of the best quality of material and of uniform size. Individual dies set each strand at the same angle and the finished sheets are all uniform in size with no uneven or ragged edges, which means there is no trimming or patching to do on the job.

For ornamental plastering, Economy Diamond has no equal. For bending into corners, working around beams, cornices and columns, it has no superior.

METAL LATH PREVENTS
PLASTER FROM CRACKING

On the largest public buildings, the palatial residences and the humble home, Economy Diamond Lath is doing its duty as a safeguard of human life and property.



Hutchins Public School, Detroit

Plaster is the most adaptable material for interior decorations, and its full adaptability was never brought out until it was used over Metal Lath.



*Residence of Mr. E. R. Mason, Des Moines, Iowa
Architect, C. E. Cope*

Sizes and Weights of Economy Diamond Lath

Painted	2.2 lbs. per sq. yd.
Painted	2.5 lbs. per sq. yd.
Painted	3.0 lbs. per sq. yd.
Painted	3.4 lbs. per sq. yd.
Galvanized	2.5 lbs. per sq.
Galvanized	3.4 lbs. per sq. yd.

Sheets 24"x96", 9 sheets, 16 sq. yds. to bundle.
(See specifications on page 21).

ECONOMY CORNER BEAD meets all the requirements as a protection for plastered corners. It has a medium size nose and having the throat drawn up tight, makes it a very rigid bead.

There are two chief reasons for using Corner Bead—the first is to protect the plastered corners in case of knocks—the second is to form a ground or guide for the plasterer.

The use of Corner Bead makes easy the otherwise difficult and slow job of turning a plastered corner.



ECONOMY CORNER BEAD

To meet the requirements of a corner protection and guide, it is necessary that bead should be of rigid type, of good weight and each section perfectly straight. These requirements are fully covered by Economy Bead.

Made only of best grade tight coat galvanized sheet, weight 175 lbs. per 1000 ft., in length 6, 7, 8, 9 and 10 ft. Shipped 10 pieces to the bundle.

ECONOMY BASE BEAD provides an economical means of separating composition flooring from the plastered walls. It also serves as a ground or guide for the plasterer.

Made only of best grade tight coat galvanized sheet. Weight 135 lbs. per 1000 ft., in lengths 6, 8 and 10 ft. for half-inch grounds. Shipped 12 pieces to the bundle.



ECONOMY BASE BEAD

COLD ROLLED CHANNEL is light in weight yet rigid enough to form studs for hollow or solid plastered partitions and for framing suspended ceilings, beam and column furring.



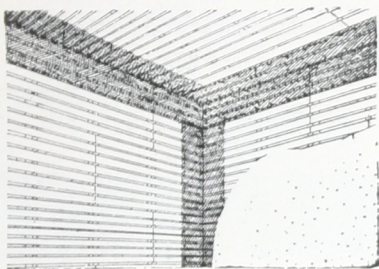
COLD ROLLED CHANNEL

Sizes and Weight

Size	Leg	Gauge	Wt lbs. per 1000 ft
$\frac{3}{4}$ in.	$\frac{3}{4}$ in.	16	276
1 in.	$\frac{3}{4}$ in.	16	332
$1\frac{1}{2}$ in.	$\frac{3}{4}$ in.	16	442
2 in.	$\frac{3}{4}$ in.	16	553

Furnished in even foot lengths 6 to 20 ft. inclusive. Shipped in bundles $\frac{3}{4}$ and 1 in., 20 pcs. to bundle; $1\frac{1}{2}$ in. and 2 in. 10 pcs. to bdl.

KORNERITE (Metal Lath Angle) is used to reinforce wood lath in the corners of the walls and ceilings. Its use ties the lath together and prevents cracks which invariably occur if the wood lath is not reinforced.



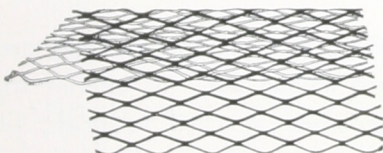
Illustrating the use of KORNERITE as reinforcement for Wood Lath

Size 3"x3" Angle.

Length 96 inches.

Shipped in crates containing 400 lin. ft.

KORNERITE



(Metal Lath Angle)

CRACKS IN WALLS AND CEILINGS SPOIL THE EFFECT OF THE FINEST DECORATIONS. THEY CAN BE PREVENTED BY USING KORNERITE.

ECONOMY WALL TIES are made from good quality galvanized sheet and not from scrap, therefore, they are all uniform in size and gauge. Every tie we ship is a good tie. Economy Wall Ties are punched at one end with two holes, which makes them suitable for use on veneer or solid brick and saves the necessity of carrying two types in stock.

All ties are the standard length of 7-in.



ECONOMY WALL TIE

Packed 1000 to a carton in the following sizes:

26 ga. Size $\frac{5}{8}$ "x7"

24 ga. Size $\frac{5}{8}$ "x7"

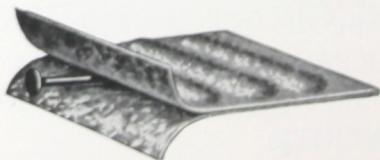
26 ga. Size $\frac{3}{4}$ "x7"

24 ga. Size $\frac{3}{4}$ "x7"

26 Ga. Size $\frac{7}{8}$ "x7"

24 ga. Size $\frac{7}{8}$ "x7"

ECONOMY WALL PLUGS are the standard nailing base for interior trim or furring when attached to brick, tile or masonry walls. They save time and have practically displaced the old and insecure methods of nailing. Economy Wall Plugs have the sides closed to prevent the admission of wet mortar, and the deep corrugations grip the nail firmly.

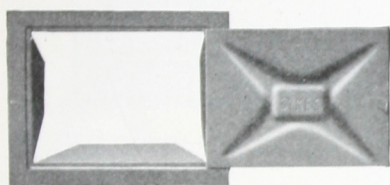


ECONOMY WALL PLUG

Packed 500 to a Carton.

Shipping Weight 80 lbs. per 1000.

ASH PIT AND FLUE CLEANOUT DOORS are the conveniences that should be installed in every house. In the old days they used to set the chimney on fire to clean the soot out; today they put an Economy Door in the base of the chimney and take it out without the danger of burning down the house.



ASH PIT AND FLUE CLEANOUT DOORS

Made in the following sizes:

6"x 8"—Shipping Wt. per carton 18 lbs.

8"x10"—Shipping Wt. per carton 28 lbs.

10"x12"—Shipping Wt. per carton 40 lbs.

Packed in cartons, each carton containing 6 of one size.

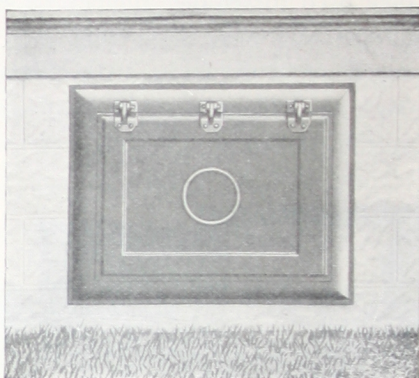
O. K. ADJUSTABLE THIMBLES are a great help to the mason when forming the stovepipe hole, and also serve to hold the pipe snug in the hole. No sagging or slipping of stove pipe when O. K. Thimbles are used. Made of 26 and 28 gauge galvanized steel.



O. K. CHIMNEY THIMBLES
(Adjustable to 6 or 7 inches)

Packed in cartons containing one-half gross.
Shipping weight 40 lbs. per carton.

ECONOMY COAL



CLOSED VIEW

ECONOMY COAL CHUTE DOORS will forever solve the problem of getting coal into the cellar without disfiguring the outside walls of the house. Very few houses are built today without this convenience, and as they cost no more than an ordinary glass window, the economy of installing them is quite evident.

The outstanding features of Economy Doors which make them different from any other door, are as follows:—

Made of all steel with exposed parts Galvanized, therefore will not rust.

No cast iron to break.

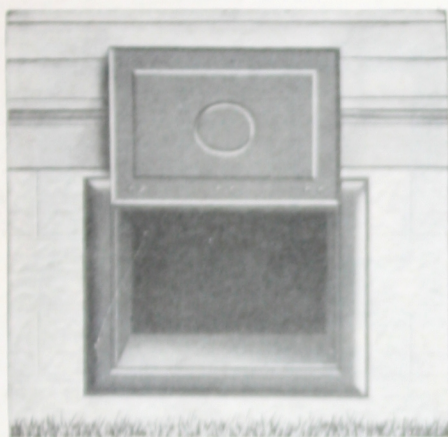
No movable parts to get detached or quickly wear out; therefore, no repairs or replacements.

A simple automatic lock that is burglar-proof.

Therefore, no extra padlock or chain to buy.

**THE ONLY DOOR MADE
WITH ALL EXPOSED PARTS
GALVANIZED**

CHUTE DOORS

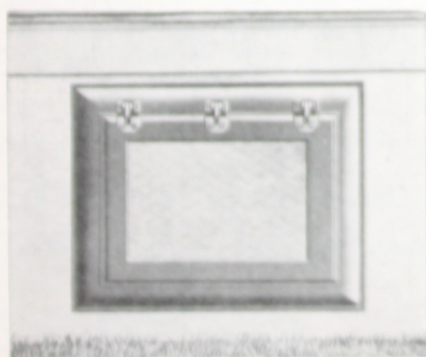


OPEN VIEW

The picture above shows why the wall of the house is protected during the delivery of the coal. The door when open full remains in an upright position, and before it can be closed, must be lifted about half an inch on the hinges.

When the coal man is thru, he simply closes the door and it locks itself. How often have you noticed houses disfigured with broken glass in the basement windows or the framing around the windows marred and blackened by the coal?

Economy Doors do away with all this.



CLOSED VIEW WITH WIRED GLASS PANEL

Specifications

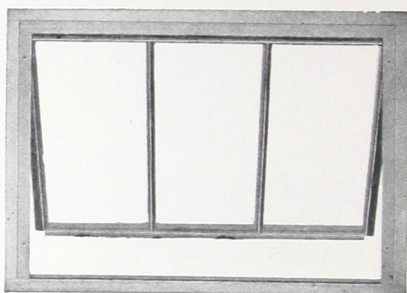
Outside measure of frame 21"x26 $\frac{1}{4}$ ".

Door opening, 17"x22 $\frac{1}{4}$ ".

Depth of apron 9".

Shipping weight approximately 30 lbs.

WON'T WARP, BIND NOR SHUT OUT 75 PER CENT OF THE LIGHT



SYKES COPPER ALLOY
steel basement windows

are extra heavy, making them easier to install, absolutely weather-tight, and a better product to sell. It has double contact weathering, cam-acting lock, and a two piece frame.

Although the window is heavier and more substantial, it is reasonable in price. Dealers are buying them by the hundreds, because their contractors can point out their quality to the home builder.

THREE STANDARD SIZES:

No. 21—3 Light—Glass Size 10 in. x 12 in.

Area 3.6 sq. ft.

Width 2 ft., 9 $\frac{3}{4}$ in. Height 1 ft., 3 in.

Weight 29 pounds.

No. 22—3 Light—Glass, Size 10 in. x 20 in.

Area 5.5 sq. ft.

Width 2 ft., 9 $\frac{3}{4}$ in. Height 1 ft., 11 in.

Weight 35 lb.

No. 23—2 Light—Glass, Size 14 in. x 20 in.

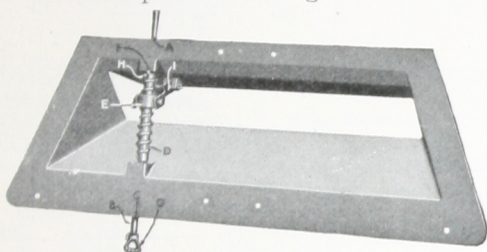
Area 5 sq. ft.

Width 2 ft., 7 $\frac{3}{8}$ in. Height 1 ft., 11 in.

Weight 31 lbs.

Shipped Unglazed

ECONOMY DOME DAMPERS as far as it is mechanically possible, provide a positive means of regulating an open fire, the mechanism by which they are operated, afford a perfect control over the fire. There are no working parts to become easily detached or broken and the installation of this device will overcome the annoyance of a smoky or stubborn fire. They can be operated by ratchet or rod control, either of which is positive acting.



DOME DAMPER ROD CONTROL

SIZES OF DOME DAMPERS

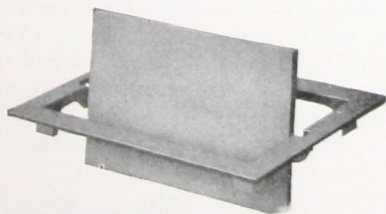
Width of of Dome at Base Front	Depth of Dome at Base	Height of Dome
30"	8½"	4½"
36"	8½"	4½"
42"	8½"	4½"

FIREPLACE DIMENSIONS

FIREPLACE		FLUE	
Width Inches	Height Inches	Depth Inches	Area Sq. Inches
30	28	18	84
36	30	18	108
42	30	20	126

Note: Inside area of Flues should be not less than 1/10 of the area of fireplace opening. Thus a fireplace 30 inches wide, 28 inches high=840 sq. inches, 1/10=84 sq. inches.

SYKES ECONOMY ASH DUMP provides a quick and economical means of allowing the ashes to drop. This eliminates tracking the dirt thru the house or allowing the ashes to accumulate under the fire.

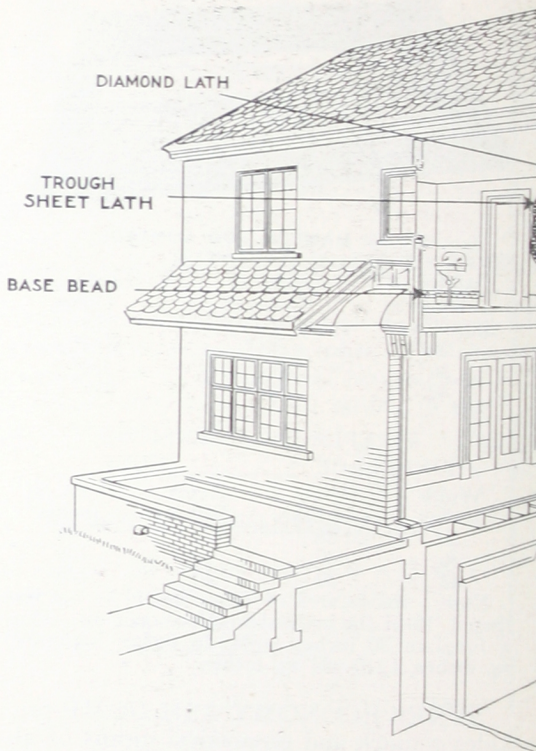


ECONOMY ASH DUMP

Size 5x7½ inches, packed 12 in a carton.

Spending Money

When you spend money, you give it in
money. At times it is for a product
depends on your

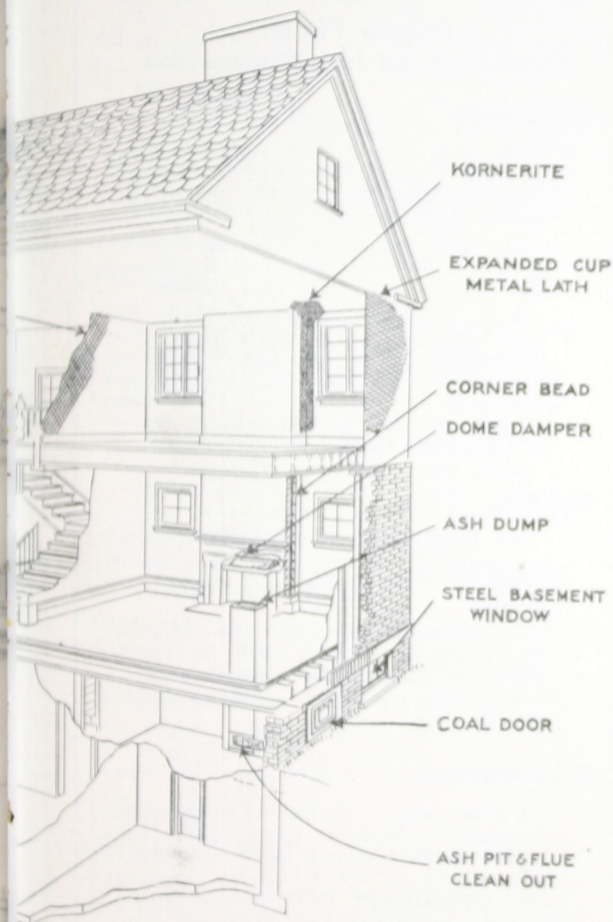


In concentrating your buying to the few
est points possible, you will receive better
service, more dealers helps, and greater re
ognition during fluctuating prices. To deter
mine your buying points, find a manufactur
who has a complete line, who will make yo
part of his machine. In placing as much

The Sykes M
N

Correctly is a Science

for a product you would rather have than
which will bring you a profit. Your profit
of spending or buying.



business to him as you can, you will find after
a year that you profited.

The Sykes Metal Lath Company makes a
complete line of steel products for home and
large constructions. Our service and products
will give you bigger profit.

Lath Company
OHIO

SPECIFICATIONS FOR METAL LATHING AND FURRING STUCCO AND OVERCOATING

Interior Plaster Wood Stud and Joist Construction

PARTITIONS:

For studs spaced not to exceed 16 inches on center, Metal Lath shall be Economy Diamond Mesh or Sure-Key 2.5 lbs. per square yard Painted.

For studs spaced not to exceed 24 inches on center, Metal Lath shall be Trough Sheet 4.5 lb. per square yard Painted.

Note: Economy Diamond Mesh and Sure-Key Laths are regularly manufactured weighing 2.2 lbs. per square yard, and are available for use where Underwriters Standards are not exacted. These styles of lath can also be furnished in heavier weights, both Painted and Galvanized.

CEILINGS:

For joists spaced not to exceed 16 inches on center, Metal Lath shall be Economy Diamond Mesh 3 lbs. per square yard Painted.

For joists spaced not to exceed 24 inches on center, Metal Lath shall be Trough Sheet 4.5 lbs. per square yard Painted.

Note: See note above regarding weights of lath.

ATTACHMENTS:

Use 6d. nails or 1½-inch 16 gauge staples to attach to studs or joists. Drive nails in not less than ¼-inch and bend heads to grip meshes of lath. Use No. 16 gauge soft annealed wire to tie lath at laps.

ERECTION:

Apply ceiling lath first, bend sheets 6 inches on to adjoining walls; if used only on walls, lath should be attached 6 inches on to adjoining ceilings.

Start lathing at top of walls one stud from corner; lath should be bent into, not joined at corners; continue around wall, lapping sheets 1 inch at ends. Lower rows shall lap upper rows not less than ½ inch.

Tie all side laps with No. 16 gauge soft annealed wire between supports.

STUCCO

WOOD FRAME CONSTRUCTION

OVER SHEATHING:

Metal Lath shall be Expanded Cup 2.5 lb. per square yard Painted; Expanded Cup 3 lb. per square yard Galvanized; Expanded Cup 3.4 lb. per square yard Painted; Expanded Cup 3.4 lb. per square yard Galvanized.

Note: The Manufacturers recommend the heaviest weight of lath, but Expanded Cup 2.5 lb. per square yard Painted, is more generally used on residence construction than any other type of lath made.

ERECTION:

Waterproof building paper should be applied over the sheathing, commencing at the bottom of the wall and lapping upper sheets one inch over lower.

Commence lath at top right hand corner, one stud away from corner. Bend sheets around corner, no joints should occur on corner. Continue around wall lapping sheets one inch at ends. Lower sheets should lap upper at least one-half inch.

No furring strips are required with Expanded Cup Lath.

Use 6d. nails or 1¼-inch 14 gauge staples. Drive nails ⅞-inch and bend over to grip lath. Lath should be nailed or stapled every 9 inches in each direction.

Stucco over sheathing shall be not less than ⅞-inch total thickness of approved material, applied in not less than two coats.

BACK-PLASTERED:

Metal Lath shall be Expanded Cup 2.5 lb. per square yard Painted; Expanded Cup 3 lb. per square yard Galvanized; Expanded Cup 3.4 lb. per square yard Painted; Expanded Cup 3.4 lb. per square yard Galvanized.

Note: See note above regarding weight of lath.

ERECTION:

Metal Lath is erected in the same manner as for over sheathing, with the exception that side laps should be tied between each stud with No. 18 soft annealed wire.

FRAMING FOR BACK-PLASTER:

Studs should be spaced not to exceed 16 inches on center. All studs should be braced horizontally between each story height with pieces of 2-inch by 4-inch set on edge between studs. Corners should be diagonally braced with pieces of 1-inch by 4-inch, let into the inner face of stud and of such length as to tie three studs adjoining each corner.

Stucco shall be not less than 1½-inch total thickness, applied in not less than two coats over face of lath and 1 coat back plastered.

APPLICATION OF STUCCO:

Apply ¼-inch scratch coat over face of lath. When hard but not dry, apply brown coat ⅝-inches. Application of stucco on back-plastered construction should be as follows:

Apply ¼-inch scratch coat over face of lath. When hard but not dry, apply back-plastered coat ⅝-inches thick. When hard but not dry, apply brown coat over scratch coat ⅝-inches thick.

Finish coat may be any of the usual finishes and should be applied not less than one week after the application of the second coat.

OVER-COATING

METAL LATH:

Same as for Over-Sheathing.

ERECTION:

Same as for Over-Sheathing.

FRAMING:

Weatherboards should be carefully examined and any loose boards should be nailed down, or if badly decayed removed and replaced.

Window and door trim should be extended to the correct projection for the added thickness of the stucco coat.

See that roof, flashing, gutters and down spouts are in good condition before stucco is commenced. All attachments for cornice, shutters, gutters and down-spouts should be fixed before stucco is commenced.

STUCCO MATERIALS:

Stucco shall have a total thickness of not less than ⅞-inch over the face of the lath and shall be applied in not less than two coats.

INTERIOR PLASTERING FIREPROOF CONSTRUCTION

METAL STUD PARTITIONS SOLID OR HOLLOW:

Metal Lath for studs spaced 12 inches on centers, shall be Economy Diamond Mesh or Sure-Key 2.2 lb. per square yard Painted.

Metal Lath for studs spaced 16 inches on centers, shall be Economy Diamond Mesh or Sure-Key 2.5 lb. per square yard Painted.

Metal Lath for studs spaced 16 to 24 inches on centers, shall be Trough Sheet 4.5 lbs. per square yard Painted.

STUDDING:

Studs for solid partitions shall be $\frac{3}{4}$ -inch Cold Rolled Channel weighing 276 lbs. per lineal ft.

Studs for hollow partitions shall be a double row of $\frac{3}{4}$ -inch Cold Rolled Channel weighing 276 lbs. per 1000 lineal ft., and spaced the desired width with spacers.

FLOOR AND CEILING RAILS:

Floor and ceiling rails shall be 1-inch Cold Rolled Channel weighing not less than 332 lbs. per 1000 lineal ft.

SPACERS, BRACES, TIE WIRE:

Spacers or braces shall be of substantial design spaced every three feet of height of stud.

Tie Wire shall be No. 18 gauge soft annealed.

ERECTION:

Rails at floor and ceiling shall be securely fastened to the permanent members.

Studs shall be secured to rails by bolts or wiring.

Note: See construction details pages 25 and 26.

On solid partition Metal Lath shall be applied on one side of the stud only.

On hollow partition Metal Lath shall be applied to both sides of studs.

Start lathing one stud from right hand corner and continue around wall, lapping sheets at ends one-inch.

Lower sheets should lap upper not less than $\frac{1}{2}$ -inch. Tie lath to studs every 6 inches with No. 18 gauge soft annealed wire. Tie side laps between studs with No. 18 gauge soft annealed wire.

See construction details pages 25, 26.

CEILINGS

SUSPENDED CEILING:

Metal Lath shall be Economy Diamond 3 lb. per square yard Painted, or 3.4 lb. per square yard Painted, or Sure-Key 3.4 lb. per square yard Painted.

Runner Channels shall be 1½-inch Cold Rolled Channel weighing 442 lbs. per 1000 lineal ft., and shall be spaced not to exceed 4 feet on centers.

Hangers shall be No. 8 Galvanized Wire or 1x3/16 Flat Bars, or 7/32-inch Round Mild Steel Rods and shall be spaced not to exceed 4 feet in any direction.

Furring Channel shall be ¾-inch Cold Rolled Channel Weighing not less than 276 lbs. per 1000 lineal ft., and shall be spaced not to exceed 16 inches on centers.

ERECTION:

Hangers shall be securely attached to permanent members. When hung from concrete beams or arches, hangers shall be placed before concrete is poured. When hung from terra-cotta arches bolts shall be bored in under side of tile, into which hanger is inserted and secured with cross pieces of steel rod.

To lower end of hangers shall be securely attached with wire or bolts, the runner channel.

At right angles to runner channel shall be wired the furring channel.

Metal Lath shall be erected with long dimension of sheet across furring channel and securely wired to same every 6 inches with No. 18 gauge soft annealed wire.

Sheets of lath shall lap at ends 1-inch and at sides ½-inch, and shall be tied at laps between furring with No. 18 gauge soft annealed wire.

Note: See construction details page 28.

ATTACHED TO BEAMS:

Metal Lath shall be Economy Diamond 3 lb. per square yard Painted, or 3.4 lb. per square yard Painted, or Sure-Key 3.4 lb. per square yard Painted.

Furring Channel shall be ¾-inch Cold Rolled Channel weighing 276 lbs. per 1000 lineal ft., spaced not to exceed 16 inches on centers.

Note: For furring channel spaced not to exceed 24 inches on centers, Metal Lath shall be Trough Sheet 4.5 lbs. per square yard Painted.

ERECTION:

Securely attach furring channel to soffit of beams and at right angle to same, using clips or No. 16 gauge soft annealed wire.

Attach Metal Lath to furring channel as in suspended ceiling.

Note: See construction details page 28.

BEAMS AND CORNICES

Metal Lath shall be Economy Diamond 2.5 lb. per square yard Painted, or 3 lb. per square yard Painted.

Brackets shall be $\frac{3}{4}$ -inch Cold Rolled Channel weighing 276 lbs. per 1000 lineal ft., or 1-inch x $\frac{3}{16}$ -inch Flat Bars.

Longitudinal rods shall be $\frac{3}{4}$ -inch Cold Rolled Channel weighing 276 lbs. per 1000 lineal ft.

ERECTION:

Brackets shall be formed to the contour of the beam or cornice, and shall be securely attached to permanent member.

Longitudinal rods shall be tied to brackets with No. 16 soft annealed wire.

Metal Lath shall be erected with long dimension of sheet parallel to longitudinal rods, bent into and conforming with outline of beam or cornice, and securely wired with No. 16 gauge soft annealed wire.

Note: See construction details page 28.

COLUMNS AND PILASTERS

Metal Lath shall be the same as for Beams and Cornices.

Vertical framing shall be $\frac{3}{4}$ -inch Cold Rolled Channel weighing 276 lbs. per 1000 lineal ft.

Hoops or brackets shall be $\frac{3}{4}$ -inch Cold Rolled Channel or $\frac{3}{16}$ "x1" Flat Steel Bars.

ERECTION:

Hoops or brackets formed to the contour of finished column or pilaster, shall be securely attached to permanent members.

Vertical framing shall be tied to brackets with No. 16 gauge soft annealed wire.

Metal Lath with the long dimension of sheet across framing members shall be bent to the outline of column or pilaster and securely wired to framing with No. 16 gauge soft annealed wire.

Note: See construction details page 28.

WALL FURRING

Metal Lath shall be Economy Diamond Painted 2.5 lb. per squar yard Painted.

Furring shall be $\frac{3}{4}$ -inch Cold Rolled Channel weighing 276 lbs. per 1000 lineal ft.

Nailing base shall be Economy Wall Plug.

ERECTION:

Imbed Wall Plugs in mortar joints every 3 ft. height of wall with lip of plug projecting $\frac{1}{4}$ -inch beyond face of masonry.

Nail furring to plug using nail long enough to drive 2 inches and permit of heads being bent around to securely fasten channel.

Erect Metal Lath with long dimension of sheet across furring and tie every 12 inches with No. 18 gauge soft annealed wire.

APPLICATION OF STUCCO:

Proportions of stucco for all coats should be not less than 3 cu. ft. of sand to 1 sack of cement.

Proportion of hydrated lime in stucco should be not greater than $\frac{1}{5}$ the volume of cement.

The use of hair is optional and should be used in scratch coat only.

First or scratch coat should cover face of lath and be well scratched before it sets.

Back-plastered coat should be applied when scratch coat is hard but not dry, usually one day.

Brown coat on back-plastered stucco should be applied when back-plastered coat is hard but not dry, usually one day.

Brown coat for stucco over sheathing should be applied when scratch coat is hard but not dry, usually one day.

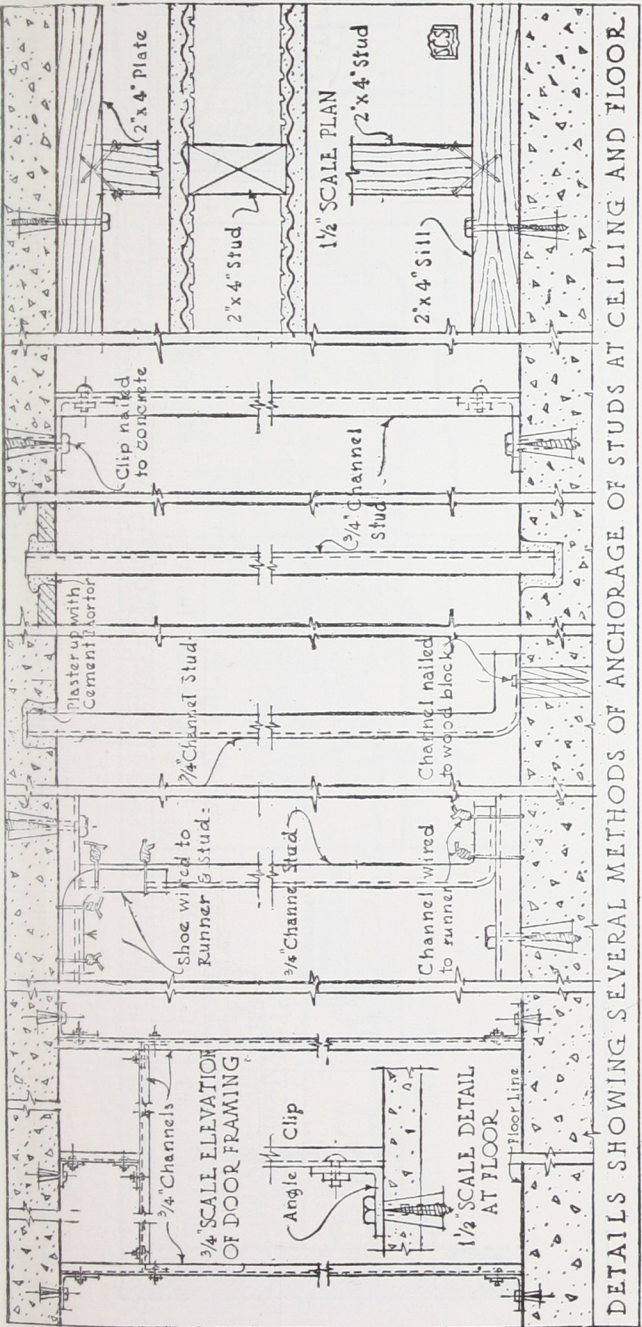
If finished coat is required, such as rough cast, pebble dash or white, should be applied one week after brown coat.

Surface Covered by Cement Mortar in Various Mixes

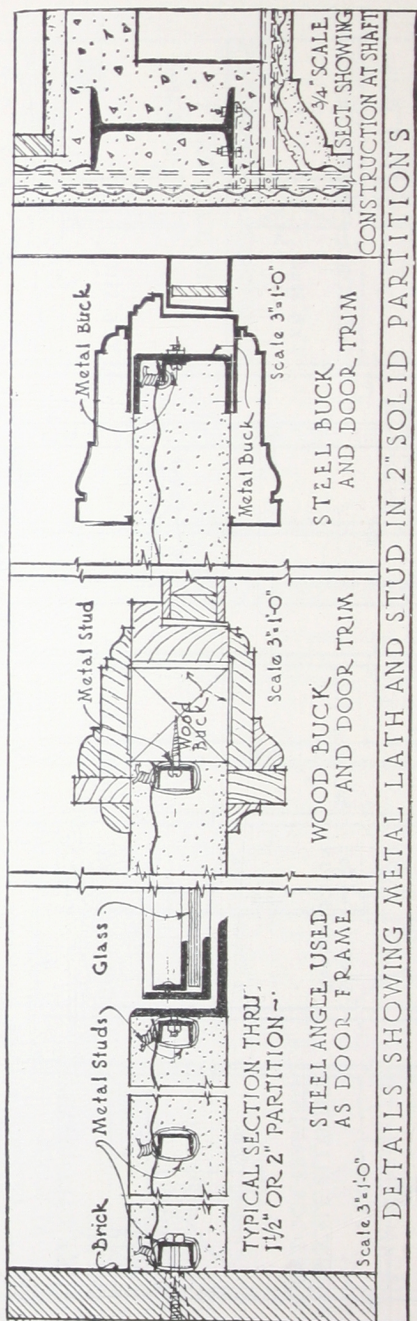
Composition of Mortar	Thickness of Coat	Sq. Ft. Covered
4 Sacks Cement and	1 inch	67
4 Cu. Ft. Sand	$\frac{3}{4}$ inch	90
	$\frac{1}{2}$ inch	134
4 Sacks Cement and	1 inch	104
8 Cu. Ft. Sand	$\frac{3}{4}$ inch	139
	$\frac{1}{2}$ inch	208
4 Sacks Cement and	1 inch	140
12 Cu. Ft. Sand	$\frac{3}{4}$ inch	187
	$\frac{1}{2}$ inch	280

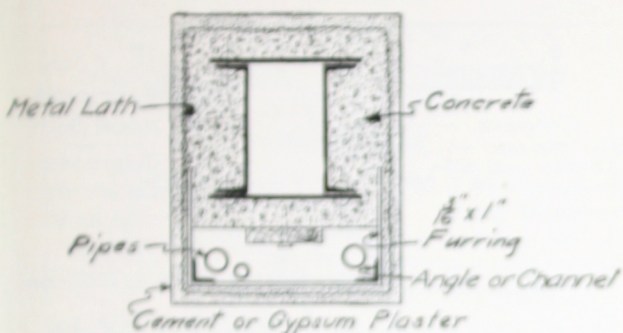
CONSTRUCTION DETAILS

Solid and Hollow Partitions

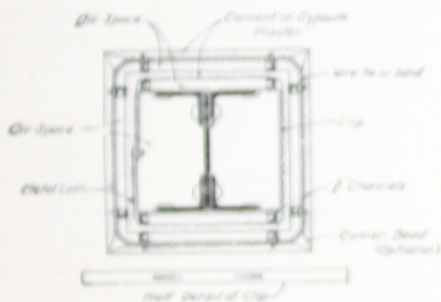


DETAILS SHOWING SEVERAL METHODS OF ANCHORAGE OF STUDS AT CEILING AND FLOOR.

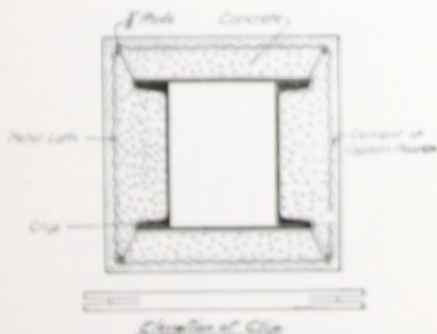




Protection of Metal Column with Provision for Pipe Chase

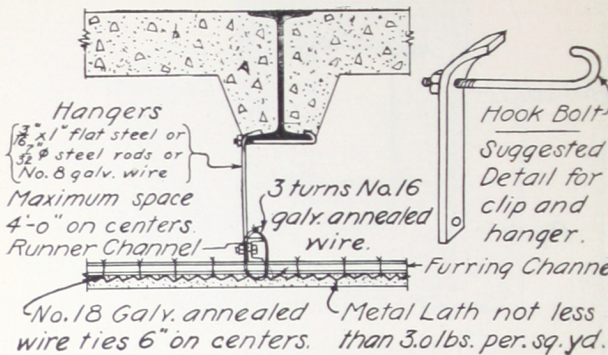


Typical Fireproofing of Plate and Angle Column



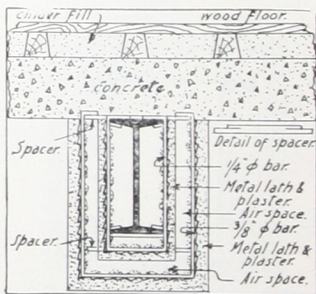
Another Suggestion for Fireproofing Plate and Channel Columns

CONSTRUCTION DETAILS COLUMN FURRING



Attached (or Suspended) Ceiling Clipped to Floor Beams
 Eliminates Fireproofing of Steel Beams and Girders

CONSTRUCTION DETAILS SUSPENDED CEILINGS



Fireproofing of Steel Beams Under
 Concrete Floors

CONSTRUCTION DETAILS BEAM FURRING

INFORMATION ON PLASTERING

Gypsum Plaster

Quantities for 100 Sq. Yds.

2 Coat Work on Trough Sheet Lath, $\frac{3}{4}$ -inch ground, 2 part Sand, 1 part Plaster.

Requires 10-80 lb. sacks plaster, 1600 lbs. sand.

3 Coat Work on Expanded Lath $\frac{1}{2}$ -inch Ground, 2 part Sand, 1 part Plaster.

Requires 12 sacks plaster, 1920 lbs. sand.

2 coat work on Trough Lath is usually put on by the laid-off method, the brown coat being applied immediately after the scratch coat without allowing for the latter to dry out. The brown coat is worked into the scratch so as to form practically one coat, which is less expensive than three coat work as the first two coats can be put on from the same scaffold.

Apply white finish when base is dry, using lime putty gauged with calcined plaster.

For 3 coat work on Expanded Lath, the scratch coat should be sufficient to fill up the meshes and allow to harden but not dry before applying brown coat.

Apply white finish same as in 2 coat work.

Gypsum Plasters are furnished in three forms, commonly known as "Cement Plaster," "Wood Fibre Plaster," and "Prepared Plaster."

Cement Plaster is a neat plaster, used where a supply of sand can be obtained locally and where the conditions are suitable for mixing on the job.

Wood Fibre Plaster is neat gypsum and wood fibre ready mixed by the manufacturer and does not require the addition of any other material.

Prepared Plaster is gypsum and sand ready mixed by the manufacturer, and does not require the addition of any other material.

LIME PLASTER

Scratch and Brown Coats:

Proportions for Scratch and Brown Coats should be 1 part Lime to 3 part Sand, with 3 lbs. hair to the ton in the scratch coat only.

White Coat:

Proportions for White Coat should be 25 lbs. calcined plaster, to 100 lbs. Lime for gauging. Add small proportion white sand or marble dust mixed on the board.

Hydrated Lime should be soaked 12 hrs. before using.

Hydrated Lime is lump lime slaked and refined at the mills. Its use is now more general than lump lime slaked on the job, as it insures material more uniformly slaked and cleaner than the ordinary quick lime.

Molding plaster is aged plaster of paris or is furnished by the manufacturer artificially aged and ready for use.

KEENE'S CEMENT PLASTER

3 Coat Work on Expanded Lath:

For Scratch Coat, 1 cu. ft. Cement, 1 cu. ft. Hydrated Lime, 5 cu. ft. Sand. Small amount well soaked clean Cattle Hair.

For Brown Coat, 1 cu. ft. Keene's Cement, 1 cu. ft. Hydrated Lime, 7 cu. ft. Sand.

Finish Coats:

For smooth finish, to each 100 lbs. Keene's Cement, add 80 lbs. Lime Putty.

For sand float finish, to each 100 lbs. Keene's Cement, add 400 lbs. Sand and 120 lbs. Lime Putty.

2 Coat Work on Trough Lath:

Omit Scratch Coat and use same proportions as for Brown Coat on 3 coat work.

Finish Coat:

Same as in 3 coat work.

Soak Hydrated Lime 24 hours before using.

MISCELLANEOUS INFORMATION

Foundation Walls:

Foundation Walls for Stucco on Wood Frame are constructed in the same manner as for frame or brick veneer houses, and can be either monolithic concrete, concrete block, or stone or any of the standard materials commonly used.

Concrete Blocks:

The size most commonly used is 8x8x16 inches, which makes a wall 8 inches thick. However, blocks are made 10 and 12 inches thick and 16 and 24 inches long.

Blocks should be laid on a concrete footing, which for stucco residences should be 18 inches wide, 9 to 12 inches thick.

112 blocks 8x8x16 inches will lay up 100 sq. ft. of wall 8 inches thick. To find the exact number of blocks for cellar walls, take the distance around wall in feet and multiply same by the height of wall in feet, and for each hundred square feet of wall you will require the above number of block.

Example:

Building 28 feet wide, 35 feet long with 7 ft. wall height, equals 882 square feet; 8.82 times 112 equals 987.84, or 988 blocks.

MONOLITHIC CONCRETE WALLS

Thickness of Concrete Walls is often regulated by State or Local Building Codes. 8 inches is usually specified as a minimum and 100 square feet of wall of this thickness requires $2\frac{1}{2}$ cubic yards of concrete.

A 1:2:4 mix of concrete is commonly used for cellar walls, that is, one part cement, two parts sand, four parts crushed stone.

The quantities of material required for 1 cubic yard of concrete in various proportions, are as follows:

Proportion Cement	Sand	Stone	Cement Sacks	Sand Cu. Ft.	Stone Cu. Ft.
1	2	4	6	12	24
1	2	5	5	10½	26¼
1	2½	3½	6	15	21

Materials for 100 Sq. Ft.

Walls of Various Thickness

Proportion of Mix	Thickness of Wall	Cement Sacks	Sand Cu. Ft.	Stone Cu. Ft.
1:2:4	8 in.	14½	29	58
1:2:4	9 in.	16½	33	66
1:2:4	10 in.	18½	37	74
1:2:5	8 in.	12	25½	64
1:2:5	9 in.	14	29	73
1:2:5	10 in.	18½	46	81
1:2½:3½	8 in.	14½	36½	50½
1:2½:3½	9 in.	17	42	59
1:2½:3½	10 in.	18½	46	65

FAMILIAR FACTS

To find circumference of a circle, multiply diameter by 3.1416.

To find diameter of a circle, multiply circumference by .31831.

To find area of a circle, multiply square of diameter by .7854.

To find area of a triangle, multiply base by half perpendicular height.

To find surface of a sphere, multiply cube of diameter by .5236.

A gallon of water weighs 8 lbs. ½ oz. and contains 231 cubic inches.

A cubic foot of water contains 7½ gallons, 1728 cubic inches, and weights 62½ pounds.

To find capacity of tanks of any size, square diameter, multiply by the length, and by .0034, which gives capacity in gallons.

